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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,980	12/12/2003	Jun Yamaguchi	03745/LH	2158

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER

NGUYEN, SANG H

ART UNIT PAPER NUMBER

2877

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No. 10/734,980	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Sang Nguyen	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 08/10/04 & 12/12/03.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-8 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-8 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a) ☒ All b) ☐ Some * c) ☐ None of:

 1. ☒ Certified copies of the priority documents have been received.

 2. ☐ Certified copies of the priority documents have been received in Application No. _____.

 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date <u>08/10/04</u>	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

Figures 3-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 08/01/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frosch (U.S. Patent No. 4243327) in view of Prior Art of Present Invention (Figures 3-6).

Regarding claims 1-2 and 4-5; Frosch discloses a photothermal conversion spectroscopic analysis method and apparatus comprising:

- a converging lens considered to be focus lens (20" of figure 2B) for convergent irradiating exciting light (12" of figure 2B) and detecting light onto a sample (18' of figure 2B);
- measuring means considered a detector (14 of figure 1) and a processor (26 of figure 1) for measuring a change intensity accompanying deflection of the detecting light (12" of figure 2B) upon passing through a thermal lens (30 of figure 2B) produced through the convergent irradiation of the exciting light (col.4 lines 50-62); and
- the converging lens (20" of figure 2B) satisfies a condition that a length of a shift in a focal position of the detecting light from a focal position of the exciting light (38, 40 of figure 2B) is in 2 times of a confocal length at the frequency of the exciting light (col.5 lines 1-35). See figures 1-7.

U.S. Patent Jan. 6, 1981 Sheet 2 of 5 4,243,327

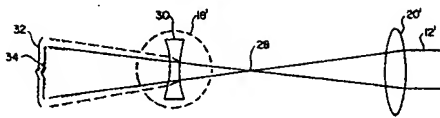


FIG. 2A

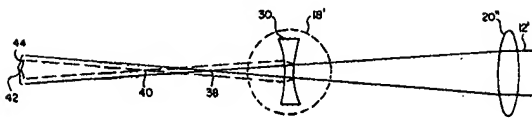


FIG. 2B

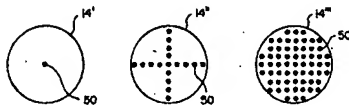


FIG. 3A

FIG. 3B

FIG. 3C

Frosch discloses all of features of claimed invention except for a length of a shift in a focal position of the detecting light is in range 2 times to 25 times or 30 times of a confocal length at the frequency of the exciting light. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine photothermal conversion spectroscopic analysis method and apparatus of Frosch with a length of a shift in a focal position of the detecting light is in range 2 times to 25 times or 30 times of a confocal length at the frequency of the exciting light, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering

the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Frosch teaches all of features of claimed invention except for the convergent irradiated exciting light and detecting light have different frequencies to one another. However, PAPI teaches that it is known in the art to provide the convergent irradiated exciting light and detecting light have different frequencies to one another (page 4 lines 17-22).

Therefore, it would have been obvious to having ordinary skill in the art the time the invention was made to combine photothermal conversion spectroscopic analysis method and apparatus of Frosch with the convergent irradiated exciting light and detecting light have different frequencies to one another as taught by PAPI for the purpose of detecting accurately intensity wavelengths of the excited light and detected light.

Claims 3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frosch in view of PAPI as applied to claims 1-2 and 4-5 above, and further in view of Okazaki (U.S. Patent No. 5,253,102).

Regarding claims 3 and 6-8; Frosch in view of PAPI discloses all of features of claimed invention as indicate claims 1-2 and 4-5 except for the converging lens comprises a rod lens. However, Okazaki teaches that it is known in the art to provide the converging lens comprises a rod lens (12 of figure 1 and col.5 lines 1-5). It would have been obvious to having ordinary skill in the art the time the invention was made to combine photothermal conversion spectroscopic analysis method and apparatus of

Frosch with the converging lens comprises a rod lens as taught by Okazaki for the purpose of performing accurately short focal lengths and correcting of the chromatic aberration with function utilizing the radially varying index of refraction.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sensui et al (5796517) discloses inner focus type telescope; Takamiya et al (5557407) discloses measuring apparatus having a diffraction grating for receiving a diverged light beam ; Burrows et al (5001718) discloses telescope thermal lens compensating laser; Gilligan (4974089) discloses television camera apparatus using gradient index rod lens; Morris et al (4938593) discloses photothermal densitometer for reading electrophoresis gels; Rosencwaig (4521118) discloses method for detection of thermal waves with a laser probe; Harris et al (4310762) discloses calorimetric trace analysis by laser induced thermal lens method; or Makino et al (JP 10142177) discloses photothermal conversion spectroscopic analyzer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

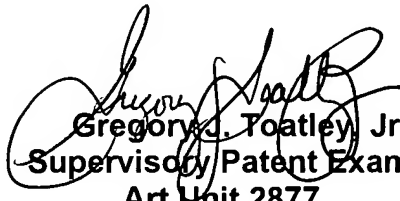
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SN

Sang Nguyen/SN

April 7, 2005


Gregory J. Toatley Jr.
Supervisory Patent Examiner
Art Unit 2877
Technology Center 2800
17 APR 05